



webserver@yucca-web1.ym.gov on 03/13/2000 03:11:59 PM

To: EISR/YM/RWDOE  
cc:

Subject: EIS Comment

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MAR 14 2000

March 13, 2000 15:11:58

IP address: 207.222.182.138

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The Commentors Name:

---> Wells Eddleman

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The Commentors Address:

--->811 Yancey Street

--->Durham, North Carolina 27701

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Email Information:

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---> Add commentor to the mailing list : yes

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Contact Information:

---> fax number :

---> phone number :

---> organization : NC Citizens Research Group Inc.

---> position : Staff Scientist

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Comment Text :

1 --Why isn't the extension of the comment period to March 20,2000  
2 on your web site yet (March 13, 2000)? NCCRG has read over the  
Nuclear Regulatory Commission's comments, and when the NRC says  
you have defects in your analysis of something nuclear, you can  
have VERY high confidence that you do.

3 NCCRG should have acquired a hard copy of the EIS, but the full  
set of allegedly "supporting" documents would probably fill a  
room. However, downloading the info to find something is nearly  
beyond possibility because the page numbers on the web and the  
page numbers in the documents are not the same, e.g. standard  
practice of pagination of section 3 might be page 3-17, but in  
the web-accessible file, it might be page 79 of 439.

4... Good heavens, is this all the space one has to comment? That is  
amazingly ridiculous. So is DoE's claim to be using "sound science  
and engineering," e.g. considerable commercial nuclear fuel is  
having burnups of, e.g., 47,000 MW-days per Metric Ton Uranium,  
but the key assumption is for much less on average (see p. A-14,  
Table A-5. ("averages" at 39,560 (PWR) and 32,240 (BWR) Where does  
the "average" come from???)

Oops, your site won't let me retrace my steps through the files so  
I can't give page number references, but under the spent fuel, TRW  
report dated (1998), See Appendix A p A-14 Table 5, reference "a")

lists key assumptions including  
number 039, that concern for criticality control extends beyond  
10,000 years" which is appropriate in light of chain reactions in  
natural uranium ores, the clear infiltration of water into the  
proposed (politically selected) site as shown by the presence of  
Chlorine-36, e.g., deep in the proposed site, and the greater enrichment  
of, and presence of plutonium (fewer delayed neutrons from fission)  
in "spent" nuclear reactor fuel.

4 cont.

Yet only 10,000 years is selected. Why, when that very page notes a requirement to consider impacts beyond 10,000 years. Certainly the uranium, half life over 500 million years for U-235, 4.6 billion years for U-239, and even for Pu-239, about 24,000 years, shows that criticality will be of concern for far more than 10,000 years. NCCRG also notes the huge number of assumptions in the "engineering update to EIS file" 3/99 (DoE website on Yucca Mtn DEIS), e.g. section 2.1.1; yet many of these assumptions may be very difficult to achieve in practice and thus are far from suitable bases for analysis in an EIS or elsewhere. For example, it is assumed that spent fuel is vertically loaded into a container free of liquids, but in practice loading commercial reactor "spent" fuel into a cask almost always leaves some liquid because the loading is done under water. Where is your analysis of how this can be avoided? This is a key issue because water is not only able to facilitate corrosion in many ways, but it also transfers heat well, can provide oxygen to react with zirconium fuel cladding, hydrogen by dissociation (or by Zr-H<sub>2</sub>O reaction) AND provides a means of transport for fission products, uranium and/or TRU elements, and corrosion products of all kinds. Also water turned to steam builds up pressure which can exploit leaks, force liquids and/or gases through cracks, create gaps through thermal expansion, etc.]

5

NCCRG is also very disturbed by DoE's evident effort to evade legal requirements for disqualifying conditions for Yucca Mtn, which already exist. (proposed 10 CFR 963). NCCRG has followed DoE high-level nuclear waste studies for many years; while some technical papers are well done and useful, many are less so, and DoE's environmental impact studies are among the worst quality documents even produced with so much resources. NCCRG believes that DoE is attempting to paper over major, fatal flaws (e.g. rock porosity, water infiltration, proximity to faults, potential for volcanism, etc.) in a politically-selected site, to avoid having to scientifically select a good method and site(s) for storing highly radioactive spent nuclear fuel and HLW. The State of North Carolina attempted to politically select a site for LLW and paper over its severe geohydrologic flaws for years, at a cost of \$111 million or more. They abandoned that effort in summer 1999. How much more will DoE waste before you acknowledge that Yucca Mtn, and tuffs in general, will never be sufficiently impermeable to contain highly radioactive materials with half-lives and hazardous lives ranging into millions and hundreds of millions and perhaps billions of years?]

3-13-2000

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